

## REMARKS

Upon entry of this response, claims 7-17 and 22-34 are pending. Claim 12 has been amended. Claims 16 and 34 have been withdrawn. Claim 1-6 and 18-21 have been canceled in prior responses.

Support for the amendment to claim 12 is found at least at ¶0046, as appearing in corresponding U.S. App. Pub. No. 2005/0049313. Support for the amendments to claims 32-33 is found at least at ¶0019.

No new matter has been added by way of this response.

### **Withdrawn Election Requirement**

Applicants acknowledge withdrawal of all prior restriction and election requirements, specifically the Restriction Requirement of July 24, 2007 and the Notices of March 15, 2007 and May 7, 2007.

### **Summary of Prosecution**

It is noted that the Restriction Requirement of July 24, 2007 replaced the prior restriction requirement of August 8, 2006. A brief history of restriction-related prosecution (encompassing two Actions, three Notices, four Responses, and two interviews) is provided.

The Examiner issued a first Restriction Requirement August 8, 2006. Applicants interviewed the Examiner for clarification of the restriction requirement on August 17, 2006. Applicants filed a first response to the restriction on February 8, 2007. The Examiner issued a notice of non-fully responsiveness on March 15, 2007. Applicants filed an second amended response to restriction on March 26, 2007, in which Applicants noted that: the species election of the prior response complied precisely with the Office's request; in the notice, the Office had changed the species election requirement for part C; and Applicants complied with the new requirement and elected C(b). The Examiner issued another notice of non-fully responsiveness on May 7, 2007. Applicants filed a third amended response to restriction on June 8, 2007, in which Applicants noted that the Examiner's comments regarding claim 12 were not supported



by the restriction requirement of record and that the Examiner's objection to a feature of claim 34 was not present in the restriction requirement of record.

After the above course of prosecution, the Examiner issued the July 24, 2007 restriction requirement, which replaced the prior restriction requirement. Applicants filed a fourth response to restriction on October 17, 2007. The Examiner issued a Notice of non-fully responsive on November 29, 2007. Applicants interviewed the Examiner on January 22, 2008.

Applicants continue to assert that each response filed was fully responsive the Examiner's restriction of record.

### **Interview Summary of January 22, 2008**

Applicants thank the Examiner for the interview of January 22, 2008. As asserted by Applicants, and as acknowledged by the Examiner during the interview, the previously filed response of October 17, 2007 was fully responsive to the Restriction Requirement of July 24, 2007.

It is noted that lines 14-15 are incomplete, reading "Applicants had elected Ai and not ..." but that sentence is not completed. To confirm, this response and the prior response elected A(a)(i)(b)(X)(AA1), which is 2-(3-carboxypropyl)-3-methyl-1,4-naphthoquinone (CPVK3), represented by formula (1) in the specification, encompassing claims 32-33.

Also, the Examiner appears to make a new election requirement in the Interview Summary (which was not present in the Restriction Requirement of July 24, 2007 nor the Notice of November 29, 2007, and which was not discussed during the Interview). The Examiner asserts that: "It is also noted that claims 29-31 requires [sic] a spacer which was not elected [sic] that the original election-Applicant should indicate whether or not these claims are required" (Interview Summary, p. 2, ln. 15-16). First, the Office did not previously require restriction of a spacer, and so, Applicants did not know to elect it. Second, each of claims 29-31 are generic to the ultimate species election of CPVK3 (formula I) because CPVK3 is substituted at the 2-position of the naphthoquinone (with a 3-carboxypropyl), where such substitution group includes a spacer (a hydrocarbon linear chain) and a functional group (a carboxyl group).

### **Response to Notice of November 29, 2007**



In the Notice of November 29, 2007, the Office asserts that the Applicants' Response of October 17, 2007 was not fully responsive. Applicants assert that the response filed October 17, 2007 was fully responsive to the new restriction requirement of July 24, 2007, which the Office acknowledged during the interview of January 22, 2008.

Nonetheless, in the interest of furthering prosecution, and as requested by the Examiner in the Interview Summary, Applicants submit the present Response. The balance of this response is the same as that filed October 17, 2007, except in election B(1-4) (*see italics, p. 9*), which reflects the species election clarified in the Interview.

### **Election/Restrictions Required**

The Office now requires an election of invention Group I (claims 7-15, 17 and 22-33) or invention Group II (claims 16 and 34). In response to the Office's invention group election requirement, **Applicants elect invention Group I claims 7-15, 17 and 22-33 for further examination.**

The Office additionally requires a series of species elections. **It is noted that at least current claim 7 is generic to all species.** In electing the species below, Applicants request REJOINER, under MPEP § 821.04, of the non-elected species claims upon allowance of any generic claims or claims directed to the elected species.

In response to the Office's species restriction of A(a-b), Applicants elect species A(a), which is a naphthoquinone derivative. **Claims 22-33** are readable on the A(a) elected species and are designated for further examination.

In response to the Office's sub-species restriction of A(a)(i-ii), Applicants elect species A(a)(i), which is a one or more kinds of naphthoquinone molecule. **Claims 22-33** are readable on the A(a)(i)(b) elected sub-species and are designated for further examination.

In response to the Office's sub-sub-species restriction of A(a)(i)(a-b), Applicants elect species A(a)(i)(b), which is a 2-methyl-1,4-naphthoquinone (VK3) derivative. **Claims 23-33** are readable on the A(a)(i)(b) elected sub-sub-species and are designated for further examination.

In response to the Office's sub-sub-sub-species restriction of A(a)(i)(b)(Xa-Xp), Applicants elect species A(a)(i)(b)(Xb), which is a 2-methyl-1,4-naphthoquinone (VK3) derivative



modified with a carboxyl group. **Claims 26-33** are readable on the A(a)(i)(b)(Xb) elected sub-sub-sub-species and are designated for further examination.

In response to the Office's sub-sub-sub-sub-species restriction of A(a)(i)(b)(X)(AA1-AA3), Applicants elect species A(a)(i)(b)(X)(AA1), which is 2-(3-carboxypropyl)-3-methyl-1,4-naphthoquinone (CPVK3), represented by formula (1) in the specification. **Claims 32-33** are readable on the A(a)(i)(b)(X)(AA1) elected sub-sub-sub-species and are designated for further examination.

In response to the Office's species restriction B(1-4), Applicants elect species B(1), which is one enzyme and an electrode. *It is noted that the restriction of record recites "at least one enzyme and an electrode", but that the Notice of November 29, 2007 changed the required election to "one enzyme and an electrode". As indicated in the prior response, where the election requirement is "one enzyme and an electrode", Applicants elect one enzyme and an electrode, **read on by claims 7-9, 13-15, 17, and 22-33**, designating such for further examination.*

In response to the Office's species restriction of C(a-b), Applicants elect C(b), which is whereby the enzyme or enzymes are immobilized. **Claims 8-15** are readable on the C(b) elected species and are designated for further examination.

In response to the Office's species restriction of D(x-z), Applicants elect D(x), which is whereby the enzyme contains diaphorase. **Claims 9-12** are readable on the D(x) elected species and are designated for further examination.

In response to the Office's species restriction of E(a-b), Applicants elect species E(a), which is further comprising NADH immobilized. **Claim 12** is readable on the E(a) elected species and is designated for further examination. Applicants note the present amendment to claim 12, which clarifies that NADH is an organic non-protein small molecule.

In response to the Office's species restriction of F(m-n), Applicants elect species F(m), which is whereby the enzyme is immobilized on the electrode by both a polymer and a crosslinking agent. **Claims 13-15** are readable on the F(m) elected species and are designated for further examination.



It is understood that the Office does not require species election between F(m)(a-b), given that (a) corresponds to the polymer of F(m) and (b) corresponds to the crosslinking agent of F(m).

In response the Office's co-sub-species restriction of F(m)(a)(p-q), Applicants elect sub-species F(m)(a)(p), which is whereby the polymer is polyvinylimidazole. **Claim 14** is readable on the F(m)(a)(p) elected sub-species and is designated for further examination.

In response the Office's co-sub-species restriction of F(m)(b)(i-ii), Applicants elect sub-species F(m)(b)(i), which is whereby the crosslinking agent is polyethylene glycol diglycidyl ether. **Claim 15** is readable on the F(m)(b)(i) elected co-sub-species and is designated for further examination.



## CONCLUSION

Applicants believe that the claims as presented represent allowable subject matter. If the Office desires, Applicants welcome a telephone interview to expedite prosecution. Applicants petitions the Office for a two month extension of time, of which the first month extension fee was submitted January 22, 2008 via credit card on EFS-Web; and the balance of extension fees are paid herewith via credit card on EFS-Web. The Commissioner is hereby authorized to credit any overpayment or deduct any deficiency not covered by these credit card payments with respect to this response to Deposit Account No. 19-3140.

Respectfully submitted,

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